Addenda and Errata

Additional posters at the Tuesday, May 11 Poster Session:

C-27 **Spectroscopic Evolution of *In Situ* Perovskite Film Growth on Reduced Graphene Oxide for Graphene-Perovskite Solar Cells (**Muge Acik)

APS-U-1 **Updates to the Storage Ring Vacuum System Design for the APS Upgrade Project** (B. Stillwell)

APS-U-2 **X-ray Sources for the APS Upgrade - MBA Lattice**

APS-U-3 **Conceptual Design of Front Ends for the Advanced Photon Source Multi-bend Achromats Upgrade** (Y. Jaski, F. Westferro, S. Lee, B. Yang, M. Abliz, and M. Ramanathan)

APS-U-4 **Beam Stability R&D for the APS Upgrade** (N. Sereno, N. Arnold, H. Bui, J. Carwardine, G. Decker, L. Emery, R. Farnsworth, R. Keane, F. Lenkszus, R. Lill, R. Lipa, S. Veseli, S. Xi, and B. Yang)

Location Change at the Poster Session:

C-1 moved to A-57 Wen-Yang Gao Carbon Dioxide Chemical Fixation on Metal-organic Framework Platforms

Withdrawn from the Poster Session:

C-27 Ali Razavieh Effect of Photo-generated Carries on Electronic Transport Properties of Muti-layer Molybdenum Disulphide Nano-sheet MOSFETs

A-57 S.J. Tracy Polaron Mobility and Disordering of the Sodium Sublattice in Triphylite-Na_xFePO_4

Location Corrections, Thursday and Friday, May 12-13, 2016:

- Satellite Course: 2016 School on Liquid Surface X-ray Scattering: Data Analysis
  NEW LOCATION: Bldg. 446, APCF Auditorium (Note: Pre-registration required for this course.)

- Satellite Course: SAXS Software Packages Irena and Nika Spring 2016 Course
  NEW LOCATION: Bldg. 401, Room A5000 (Note: Pre-registration required for this course.)

APS Plenary Session Speaker Change: Yoonseob Kim replacing Nicholas Kotov (both from University of Michigan)

APS WK 3 (title change, speaker abstract):

On the Shoulders of Giants

Sean McSweeney

NSLS-II, Brookhaven National Laboratory, Upton, NY 11973

The three ABBIX (Advanced Beamlines for Biological Investigations with X-rays) beamlines are the first at NSLS-II to focus on life sciences, exploiting its inherent features including the very small source size, beam divergence, and exquisite brightness and stability. Sponsored by National Institutes of Health (NIH), these beamlines include AMX (Flexible Access and Highly Automated

Macromolecular Crystallography), FMX (Frontier Macromolecular Crystallography), and LIX (High Brightness X-Ray Scattering for Life Sciences). The beamlines view undulator sources, providing tunable x-rays down to 1 μm size with monochromatic x-ray flux at 1 Å of up to ~1013 ph/sec. End stations have goniometers with 100 nm target sphere of confusion, six-axis robots for automated sample exchange, fast hybrid pixel array detectors, and robust tools for data management and computation.

The resulting biological scientific opportunities are described in this presentation, including high-throughput structural determinations of large protein and nucleic acid complexes, crystallographic studies of drug-protein interaction, serial crystallographic studies of microcrystals, high-throughput static and time-resolved scattering studies of proteins and nucleic acids in solution, and grazing incidence and scanning probe scattering studies of biological systems.

The power of these beamlines will cause particular problems for crystallographic studies: life in the beam is estimated to be about 10ms thus new approaches will be needed. We have started to explore some but are keen to learn from the best and brightest!

Construction was aided, and future operation will be supported, by the US Department of Energy Offices of Biological and Environmental Research (BER) and Basic Energy Sciences (BES) grants DE-AC02-98CH10886 and E-SC0012704, and by NIH grants P41RR012408, P41GM103473, and P41GM111244. Additional support was provided through the NSLS-II Project (sponsored by BES), and SUNY Stony Brook through an NIH equipment grant. The American Recovery and Reinvestment Act funded a portion of the construction.

CNM WK 7 (speaker abstract):

Multi-scale Imaging of the Nervous System: Where's the Dark Matter?

Mark H. Ellisman

National Center for Microscopy and Imaging Research (NCMIR) at the Center for Research in Biological Systems, University of California--San Diego, La Jolla, CA 92093

A grand goal in cell biology is to understand how the interplay of structural, chemical and electrical signals in and between cells gives rise to tissue properties, especially for complex tissues like nervous systems. New technologies are hastening progress as biologists make use of an increasingly powerful arsenal of tools and technologies for obtaining data, from the level of molecules to whole organs, and at the same time engage in the arduous and challenging process of adapting and assembling data at all scales of resolution and across disciplines into computerized databases. This talk will highlight projects in which development and application of new contrasting methods and imaging tools have allowed us to observe otherwise hidden relationships between cellular, subcellular and molecular constituents of cells, including those of nervous systems. New chemistries for carrying out correlated light and electron microscopy will be described, as well as recent advances in large-scale high-resolution 3D reconstruction combining light, x-ray, and electron microcopy. Examples of next-generation cell-centric image libraries and web-based multiscale information exploration environments for sharing and exploring these data will also be described.